ABSTRACT OF THE DISCLOSURE

A cement composition for liquid casting, based on a binder comprising Portland cement and additives comprising at least a fluidizer and a combination of a thickening agent acting by steric exclusion and a gelling thickening agent. The composition can also include a surface active agent to regulate the quantity of entrained air. Mixed with water and an aggregate, it permits obtaining, in a single casting, a self-leveling casting of a high thickness (equal to at least 6 cm) and of low density (about 1.6 to 1.9).